

Remarks/Arguments

Claims 1, 5 – 7 and 9 - 17 are pending. No claim amendments have been made in response to the present Office action.

Rejection of claims 1, 5-7 and 9 - 17 under 35 USC 103(a) as being unpatentable over U.S. Patent No. 6,223,348 (Hayes) in view of U.S. Patent No. 5,818,029 (Thomson).

Applicants submit that for the reasons discussed below present claims 1, 5 – 7 and 9 - 17 are patentably distinguishable over the teachings of Hayes and Thomson.

CLAIMS 1, 5, 9 and 10

The invention as recited in claim 1 is not rendered obvious by the combination of Hayes and Thomson proposed by the Examiner, as the proposed combination would not result in all of the limitations of claim 1.

The standard for a *prima facie* case of obviousness is the following:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. . . . *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

MPEP §2142 (8th edition, rev. 2, 2004)

In the present case, the Examiner has failed to establish a *prima facie* case of obviousness, as the cited references, even when combined, fail to teach or suggest all the limitations of claim 1.

Claim 1 recites an apparatus for loading computer code from a memory type integrated circuit card preloaded with computer code. The apparatus has a card interface capable of distinguishing between a conventional integrated circuit

card and a memory type integrated circuit card preloaded with computer code. The card interface has a first data port for transferring data in accordance with a first standard and a second data port for transferring data in accordance with a second standard. The apparatus also has a memory for storing computer code for execution by the apparatus, and a microcontroller coupled to the card interface and to the memory. If the card is a memory card, the microcontroller reads the computer code from the memory card by way of the second data port to the memory, for thereby updating the computer code stored in the memory so as to effect a change of the functional operation of the apparatus.

The combination proposed by the Examiner does not include a "card interface having a first data port for transferring data in accordance with a first standard and a second data port for transferring data in accordance with a second standard." The Examiner states that Thomson teaches an apparatus having first and second data ports, referring to the Abstract and col. 2, lines 21 – 33. In fact, however, a detailed reading of the Abstract of Thomson reveals that Thomson teaches separate card slots: one Type II card slot and one Type III card slot (see Abstract). Both slots employ the PCMCIA standard. Thomson also teaches a bezel with two openings, one for a card designated as type III of the PCMCIA standard, and one opening to allow the insertion of a card designated as type II of the PCMCIA standard (col. 2, lines 25 – 33). The distinct card slots are not first and second data ports for transferring data in accordance with first and second standards. Rather, the slots accommodate transfer of data for two cards, using the *same* standard, i.e., the PCMCIA standard. PCMCIA Type II and Type III cards differ in their thickness, not in their bus connections or manner of data transfer. See, for example, the attached excerpt from the home page of the PCMCIA. In Thomson, the transfer of data from a PCMCIA card 74 to the host computer 21, as described in col. 8, lines 25 – 48, is accomplished using the same standard, regardless of which slot is used.

The above notwithstanding, the combination proposed by the Examiner would also not provide "a card interface capable of distinguishing between a

conventional integrated circuit card and a memory type integrated circuit card preloaded with computer code.” The Examiner states that Hayes teaches an apparatus capable of distinguishing between card types at col. 6, line 61. In fact, in Hayes, “the first byte of data on the Smart Card 15 is read and evaluated to determine if the Card 15 is of the correct type. If not the microprocessor 26 returns to its idle state . . .” Thus, Hayes can determine if a card is of one given type, but cannot distinguish *between* a conventional integrated circuit card and a memory type integrated circuit card preloaded with computer code. Merely determining if the inserted card is of the “correct” type, as in Hayes, does not constitute “distinguishing between a conventional integrated circuit card and a memory type integrated circuit card preloaded with computer code.”

The combination proposed by the Examiner does not provide “a card interface capable of distinguishing between a conventional integrated circuit card and a memory type integrated circuit card preloaded with computer code” for the further reason that Hayes teaches only the use of conventional integrated circuit cards. Hayes states that the “electrical and mechanical interface of Smart Card 15 with the remote control 11 conforms to, and complies with, the international standard ISO 7816 for integrated circuit cards which have an interface with electrical contacts.” (col. 5, lines 54 – 57). Cards in accordance with the ISO 7816 standard are an example of a “conventional integrated circuit card,” as that term is used in claim 1. In one exemplary embodiment, as explained in the specification at page 4, lines 20 – 24, “after recognizing a memory card 104 has been inserted, the microcontroller 108 activates an NRSS interface (as opposed to a conventional ISO standard 7816 interface) to utilize the high speed data ports and extracts the data (the executable computer code 124) from the memory card at about 42 Mbits/second.” Thus, it will be appreciated that a smart card, as taught by Hayes, is a “conventional integrated circuit card,” and not a “memory card” as recited in claim 1. For this additional reason, the combination of Hayes and Thomson does not teach “a card interface capable of distinguishing between a conventional integrated circuit card and said memory card” or “a microcontroller coupled to the card interface and to the memory for, if said card is a memory card, reading said

computer code from said memory card by way of said second data port to said memory.”

The Examiner states that based on the identification of the memory card, computer code is read from the card using the port, referring to Thomson, col. 7, lines 15 – 27. In the cited portion of Thomson, memory areas on the card 74 are mapped into equivalent disk addresses so that the host computer recognizes the PCMCIA read/write converter and the PCMCIA card 74 as a SCSI hard disk drive. The operation of the cited portion of Thomson uses the PCMCIA standard in all cases. By contrast, in claim 1, the standard employed is determined by reference to the type of card identified. Thus, the standard cannot be selected based on the identification of a memory card in Thomson, as Thomson uses only a single standard.

Furthermore, a proper prima facie case of obviousness has not been made for the reason that the step of “reading computer code from said memory card” is not taught in the cited prior art. It is submitted that Hayes does not teach reading computer code from a memory card. Rather, Hayes teaches reading a compilation of device codes suitable for use with a particular universal remote control, and allows a one time transfer of a single device code (i.e., the set of code data needed to remotely operate a particular electronic device) from the readable media storage device into the remote control’s on board, non-volatile memory (col. 1, lines 54 – 61). A set of compilation of device codes is not within the ordinary meaning of “computer code” as understood by one of ordinary skill in the art.

Moreover, there is no motivation or suggestion in Hayes or Thomson to modify Hayes to transfer computer code, rather than device codes, to the universal remote of Hayes. The office action provides only a motivation to obtain a system which would automatically identify the type of card inserted (page 4, lines 6 – 8), but no motivation to provide computer code rather than the device codes of Hayes.

For at least the foregoing reasons, claim 1 is allowable over the prior art of record. Claims 5, 9 and 10, which depend from claim 1, are allowable for at least the reasons that claim 5 is allowable.

CLAIM 6

Claim 6 depends from claim 5, which depends from claim 1. In addition to the limitations of claim 1, claim 6, as a result of the limitations of claim 5, recites that the card interface has means for producing a first signal that is coupled to an integrated circuit card connection; and means for analyzing a second signal that is produced by the memory card in response to the first signal. The second signal is not produced by integrated circuit cards that are not memory cards.

The Examiner states that in Hayes, integrated circuit cards that are not memory cards do not produce the cited signal. However, Hayes does not distinguish between memory cards and other integrated circuit cards. Rather, Hayes determines if the card is a Smart Card of the "correct type." Furthermore, the Smart Cards of Hayes are conventional integrated circuit cards, not memory cards. Accordingly, the combination proposed by the Examiner does not have all of the limitations of claim 6.

For at least the foregoing reasons, as well as the reasons set forth above in connection with claim 1, claim 6 is allowable over the prior art of record.

CLAIM 7

Claim 7 depends from claim 6, and further requires that the card interface applies the first signal to a clock signal connector of the integrated circuit card connection and receives the second signal on a data input/output signal connector of the integrated circuit card connection.

The combination proposed by the Examiner does not provide all of the limitations of claim 7. The Examiner states that Hayes teaches applying a signal to a clock signal connector of an integrated circuit card connection, referring to col 7,

line 45, as well as receiving a second signal on a data input/output signal connector of the integrated circuit card connection, referring to col. 7, lines 43 – 44. However, the cited portion of Hayes does not relate to the process of identifying the type of card that has been inserted. Rather, this portion of Hayes relates to “a circuit and program logic . . . provided to select which device is active at which time.” (col. 7, lines 39 – 40). In Hayes, this “is accomplished by connecting an input/output port pin 38 on the microprocessor 26 in such a manner that when it is in one state it disables the onboard EEPROM 27 via its enable/disable pin 25 while simultaneously enabling output of the clock signal 24 to the Smart Card connector via transistor 39, while in the other state it enables the onboard EEPROM 27 while disabling the clock output to the Smart Card connection.” In the cited portion of Hayes, a clock signal is output to the Smart Card connector. Claim 7 requires that the second signal is provided in response to the first signal, which is on a clock signal connector. Hayes does not teach or suggest that the second signal is provided in response to the clock signal output to the Smart Card connector. In fact, Hayes teaches that this process is used while performing the functions of reading any data from the card (see col. 7, lines 48 – 51, and Fig. 6). Since Hayes applies the clock signal not only when determining if the card is of the correct type, but also when reading the memory block header, and reading a block from the card, the second signal identifying the card type clearly is not provided in response to the clock signal.

For at least the foregoing reasons, as well as the reasons set forth above in connection with claims 1 and 6, claim 7 is allowable over the prior art of record.

CLAIM 11

Claim 11 is an independent method claim. The claimed method is for loading computer code in a computer controlled device having a smart card interface for receiving a smart card, where the card interface has a first data port for transferring data in accordance with a first standard and a second data port for transferring data in accordance with a second standard. The method has a step of identifying whether a smart card inserted in the interface is a memory card

containing a memory unit with preloaded computer code and a memory controller, or a conventional integrated circuit card. If the card is a memory card, the method proceeds to transfer the computer code in the memory card through the second data port of a memory card into the computer controlled device, such that the transferred computer code is stored in a memory so as to effect a change in the functionality of the computer controlled device.

The combination proposed by the Examiner does not include all of the limitations of claim 11. The method of Hayes does not include a step of identifying whether a smart card is a memory card containing a memory unit with preloaded computer code and a memory controller, or a conventional integrated circuit card. In Hayes, "the first byte of data on the Smart Card 15 is read and evaluated to determine if the Card 15 is of the correct type. If not the microprocessor 26 returns to its idle state . . ." Thus, in Hayes, the method determines whether or not a card is of one type, but does not identify whether the smart card is a memory card containing a memory unit with preloaded computer code, and a memory controller, or a conventional integrated circuit card. Merely determining if the inserted card is of the correct type, as in Hayes, does not constitute identifying which of two types of memory card has been inserted.

The proposed combination does not include a step of identifying whether a smart card is a memory card containing a memory unit with preloaded computer code and a memory controller, or a conventional integrated circuit card, for the further reason that Hayes teaches the use solely of a conventional integrated circuit card. As explained above, Hayes states that the "electrical and mechanical interface of Smart Card 15 with the remote control 11 conforms to, and complies with, the international standard ISO 7816 for integrated circuit cards which have an interface with electrical contacts." (col. 5, lines 54 – 57). Cards in accordance with the ISO 7816 standard are an example of a "conventional integrated circuit card," as that term is used in claim 11. Thus, the Smart Card taught by Hayes is a conventional integrated circuit card.

Furthermore, the proposed combination does not provide a "method of loading computer code in a computer controlled device having a smart card interface for receiving a smart card, said card interface having a first data port for transferring data in accordance with a first standard and a second data port for transferring data in accordance with a second standard." Thomson does not teach two standards for transferring data. Rather, the method of Thomson always employs the PCMCIA standard for transfer of data. While Thomson teaches communication with PCMCIA cards of different types, those types refer only to different physical sizes of PCMCIA cards, and not to the use of different data standards. As noted above, there is only one PCMCIA data standard. Thus, neither Thomson nor Hayes teaches a smart card interface having first and second data ports for transferring data using different data standards.

The proposed combination also does not provide the step of "transferring the computer code in said memory card through said second data port of a memory card into said computer controlled device; such that the transferred computer code is stored in a memory so as to effect a change in the functionality of the computer controlled device." As explained in connection with claim 1, Hayes teaches reading a compilation of device codes suitable for use with a particular universal remote control, and allows a one time transfer of a single device code (i.e., the set of code data needed to remotely operate a particular electronic device) from the readable media storage device into the remote control's on board, non-volatile memory (col. 1, lines 54 – 61). A set of compilation of device codes is not within the ordinary meaning of "computer code" as understood by one of ordinary skill in the art.

Moreover, there is no motivation or suggestion in Hayes or Thomson to modify Hayes to transfer computer code, rather than device codes, to the universal remote of Hayes. The office action provides only a motivation to obtain a system which would automatically identify the type of card inserted (page 6, lines 2 - 5), but no motivation to provide computer code rather than the device codes of Hayes.

For at least the foregoing reasons, claim 11 is allowable over the prior art of record. Claim 14 depends from claim 11 and is allowable for the reasons that claim 11 is allowable.

CLAIM 12

Claim 12 depends from claim 11, and further recites that the identifying step includes applying a first signal to the memory card; and analyzing a second signal produced by the memory card in response to said first signal to determine if the smart card is a memory card. The Examiner states that Hayes teaches a method including applying a first signal coupled to a memory card connection and analyzing a second signal produced by a memory card in response to the first signal, referring to col. 12, lines 1 – 3, and col. 6, lines 57 – 63. The Examiner states that Hayes also teaches a method capable of identifying card types, referring to col. 6, line 61.

Hayes does not teach analyzing a second signal produced by the memory card in response to the first signal to determine if the smart card is a memory card. Indeed, Hayes teaches that smart card 15 is a conventional integrated circuit card and not a memory card. Rather, Hayes states that the “electrical and mechanical interface of Smart Card 15 with the remote control 11 conforms to, and complies with, the international standard ISO 7816 for integrated circuit cards which have an interface with electrical contacts.” (col. 5, lines 54 – 57). In one exemplary embodiment, as explained in the specification at page 4, lines 20 – 24, “after recognizing a memory card 104 has been inserted, the microcontroller 108 activates an NRSS interface (as opposed to a conventional ISO standard 7816 interface) to utilize the high speed data ports and extracts the data (the executable computer code 124) from the memory card at about 42 Mbits/second.” Thus, it will be appreciated that a smart card, as taught by Hayes, is not a memory card as recited in claim 12.

For at least the foregoing reasons, as well as the reasons set forth above in connection with claim 11, claim 12 is allowable over the prior art of record.

CLAIM 13

Claim 13 depends from claim 12 and further recites that the transferring step further comprises activating an NRSS interface. The transferring step is a step of transferring the computer code through a second data port of a memory card. Neither Hayes nor Thomson teaches first and second data ports having different data standards at all, and particularly not where the second data port employs an NRSS interface. The Examiner states that NRSS-type cards are well known, and that Hayes teaches an interface providing a clock signal. The Examiner further states that it would have been obvious to one of ordinary skill in the art at the time the invention was made that NRSS cards constituted a specific type of the memory cards. However, the Examiner does not identify a teaching or suggestion that an NRSS card be employed in one of two different data ports having different data standards.

For at least the foregoing reasons, as well as the reasons set forth above in connection with claims 11 and 12, claim 13 is allowable over the prior art of record.

CLAIMS 15 - 17

Claim 15 depends from claim 11, and contains the further limitation that the method of claim 11 further comprises toggling a reset signal. The Examiner states that Hayes teaches toggling a reset signal, citing inherent, and col. 7, lines 41 – 47.

It is respectfully submitted that the prior art does not teach the limitation of toggling a reset signal. Toggling a reset signal is advantageous in distinguishing between conventional integrated circuit cards and memory cards. As explained in the specification at page 5, lines 6 – 10, a conventional integrated circuit card is placed in sleep mode when the reset signal path is toggled, and will ignore a signal applied to any of its pins. By contrast, as explained on page 5, lines 10 – 14, when the reset signal path of a memory card is toggled, the memory card monitors the clock input path. When a pulse signal is applied to the memory card's clock input path, the data input/output path of a memory card produces an opposite state signal. As explained on page 5, lines 15 – 19, the card is identified as a memory card, and not a conventional integrated circuit card, if the data input output signal is opposite the applied clock signal. Hayes clearly does not teach toggling a reset signal, as the conventional integrated circuit card employed in Hayes would not


respond, thereby providing no information as to whether the inserted card is of the "correct type." As Hayes does not teach or suggest attempting to distinguish between a conventional integrated circuit card and a memory card, there is no teaching or suggestion in the cited art to provide the limitations of claim 15.

For at least the foregoing reasons, as well as the reasons set forth above in connection with claim 11, claim 15 is allowable over the prior art of record. Claims 16 and 17 depend from claim 15, and are allowable for the reasons that claim 15 is allowable.

CONCLUSION

Having fully addressed the Examiner's rejections it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's attorney at (609) 734-6815, so that a mutually convenient date and time for a telephonic interview may be scheduled.

Respectfully submitted,
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